

pose, therefore, that we increase every particle of matter in our universe in such a proportion, in length, breadth, and thickness, we may conceive that we tend thus to bring before our apprehension a true estimate of the quantity of organized adaptations which are ready to testify the extent of the Creator's power.

3. The other numerical quantities which we have to consider in the phenomena of the universe are on as gigantic a scale as the distances and sizes. By the rotation of the earth on its axis, the parts of the equator move at the rate of a thousand miles an hour, and the portions of the earth's surface which are in our latitude, at about six hundred. The former velocity is nearly that with which a cannon ball is discharged from the mouth of a gun; but, large as it is, it is inconsiderable compared with the velocity of the earth in its orbit about the sun. This latter velocity is sixty-five times the former. By the rotatory motion of the earth, a point of its surface is carried sometimes forwards and sometimes backwards with regard to the annual progression; but in consequence of the great predominance of the latter velocity in amount, the former scarcely affects it either way. And even the latter velocity is inconsiderable compared with that of light; which comparison, however, we shall not make; since, according to the theory we have considered as most probable, the motion of light is not a transfer of matter but of motion from one part of space to another.

The extent of the scale of density of different substances has already been mentioned; gold is twenty times as heavy as water; air is eight hundred and thirty times lighter, steam eight thousand times lighter than water; the luminiferous ether is incomparably rarer than steam: and this is true of the matter of light, whether we adopt the undulatory theory or any other.

4. The above statements are vast in amount, and almost oppressive to our faculties. They belong to